XIAO ZHANG

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EDUCATION

Ph.D. in Computer Science   *2017 - Present*
Department of Computer Science, University of Virginia, Charlottesville, VA, USA

Master of Science in Statistics   *2015 - 2017*
Department of Statistics, University of Virginia, Charlottesville, VA, USA

Bachelor of Science in Mathematics   *2011 - 2015*
Department of Mathematical Science, Tsinghua University, Beijing, China

RESEARCH INTERESTS

Machine Learning: adversarial machine learning, deep learning, representation learning
Optimization: convex/non-convex optimization, low-rank matrix estimation

PROFESSIONAL EXPERIENCES

Robert Bosch LLC, Pittsburgh, PA, USA   *Jun 2020 - Aug 2020*
Machine Learning Research Intern (Mentor: Anit Kumar Sahu)

CONFERENCE PUBLICATIONS

* denotes equal contribution.

1. Sicheng Zhu*, **Xiao Zhang***, and David Evans
   Learning Adversarially Robust Representations via Worst-Case Mutual Information Maximization.
   In the Thirty-seventh International Conference on Machine Learning (ICML 2020)
   (21.8% acceptance rate)

2. **Xiao Zhang***, Jinghui Chen*, Quanquan Gu and David Evans
   Understanding the Intrinsic Robustness of Image Distributions using Conditional Generative Models.
   In the 23rd International Conference on Artificial Intelligence and Statistics (AISTATS 2020)

3. Saeed Mahloujifar*, **Xiao Zhang***, Mohammad Mahmoody and David Evans
   Empirically Measuring Concentration: Fundamental Limits to Intrinsic Robustness.
   In the Thirty-third Conference on Neural Information Processing Systems (NeurIPS 2019)
   (Spotlight presentation, 2.97% acceptance rate)

4. **Xiao Zhang** and David Evans
   Cost-Sensitive Robustness against Adversarial Examples.
   In the Seventh International Conference on Learning Representations (ICLR 2019)
   (33% acceptance rate)

5. **Xiao Zhang***, Yaodong Yu*, Lingxiao Wang* and Quanquan Gu
   Learning One-hidden-layer ReLU Networks via Gradient Descent.
   In the 22nd International Conference on Artificial Intelligence and Statistics (AISTATS 2019)
   (32% acceptance rate)

6. **Xiao Zhang***, Simon S. Du* and Quanquan Gu
   Fast and Sample Efficient Inductive Matrix Completion via Multi-Phase Procrustes Flow.
   In the Thirty-fifth International Conference on Machine Learning (ICML 2018)
   (25% acceptance rate)

7. **Xiao Zhang***, Lingxiao Wang*, Yaodong Yu and Quanquan Gu
   A Primal-Dual Analysis of Global Optimality in Nonconvex Low-Rank Matrix Recovery
   In the Thirty-fifth International Conference on Machine Learning (ICML 2018)
   (25% acceptance rate)

8. **Xiao Zhang***, Lingxiao Wang* and Quanquan Gu
   A Unified Framework for Nonconvex Low-Rank plus Sparse Matrix Recovery
   In the 21st International Conference on Artificial Intelligence and Statistics (AISTATS 2018)
   (33% acceptance rate)

9. Lingxiao Wang*, **Xiao Zhang*** and Quanquan Gu
   A Unified Variance Reduction-Based Framework for Nonconvex Low-Rank Matrix Recovery.
   In the Thirty-fourth International Conference on Machine Learning (ICML 2017)
   (26% acceptance rate)

10. Lingxiao Wang*, **Xiao Zhang*** and Quanquan Gu
    A Unified Computational and Statistical Framework for Nonconvex Low-Rank Matrix Estimation.
    In the 20th International Conference on Artificial Intelligence and Statistics (AISTATS 2017)
    (32% acceptance rate)

PROFESSIONAL SERVICES

Journal Reviewer: Machine Learning (MLJ)

Conference Reviewer: Neural Information Processing Systems (NeurIPS)

TEACHING EXPERIENCES

Teaching Assistant, Department of Computer Science, University of Virginia

CS3102: Theory of Computation	*2019 fall*
CS6501: Optimization for Machine Learning	*2017 fall*
CS2102: Discrete Math	*2017 fall*

Teaching Assistant, Department of Statistics, University of Virginia

STAT2120: Introduction to Statistical Science	*2016 fall, 2017 spring*